

# Physics-Based Mechanism for Efficient Disestablishment of Strong Electron Bonds - The Strength of Covalent Bonds as a Function of Synchronicity-Enabled Evasion of Coulomb Repulsion

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## Introduction

A longstanding challenge; always treated as being within the domain of chemistry; has been breaking strong bonds between certain compounds in order to liberate one or more elements. High temperatures and complex chemical processes are often required in order to break apart certain compounds. Much as in the case of the previous publication concerning the use of Coulomb Force Lines in order to achieve hydrolysis; an approach that relies upon exerting shearing force in order to separate hydrogen and oxygen; a novel approach to compound separation generally which similarly has its roots in physics would certainly prove more efficient than chemical methods of achieving the same end.

## Abstract

The underpinning dynamics of covalent bonds are not well-understood, despite many physicists' inclination to treat the science of something as "simple" as the covalent bond as "settled science." As was the case with the science of optical reflection dynamics, atomic decay and nuclear fusion, mainstream physicists have been proven wrong before.

A novel way of looking at covalent bonds would be to understand them as being enabled by harmonies of timing of electrons orbiting atoms. Covalent bonding is as much dependent upon position as it is based upon the relative count of valence electrons. This would suggest that the actual mechanism at work in holding covalently bound atoms together is a harmonic of charge density within the valence shell in which electrons in the hub element (using a simple hydrocarbon bond as an example,) are prevented from repelling the liganded element by dint of the fact that electrons in the hub element are being nudged into orbits that cause them to favor orbital regions between (as in the case of CH<sub>4</sub>) the four bonding sites.

Only with the cumulative effect of four electrons from four hydrogen atoms can a strong bond be established. Once that bond is established, however, a rhythmic timing is established in the liganded atoms' electrons as well as the hub element's electrons. If this timing were to be upset (not unlike windshield wipers of the sort that cross over one another's path and must be timed precisely to avoid mutual destruction,) the result would be the disestablishment of the bond.

There are a number of physical approaches that might be used to break a bond other than forcefully plucking one element from the other using Coulomb Force

Lines, although that approach is certainly promising in the case of the separation of hydrogen from water molecules.

For other compounds such as hydrocarbons, breaking bonds might be achieved through a method that might be termed Angular-Offset Soliton Shearing. Soliton waves have the capacity to briefly alter the distribution of electrons in electron shells. A single soliton wave passing through a compound would be unlikely to disrupt a strong covalent bond as its pattern of influence is uniform. However, if soliton waves were projected into a vessel containing a strongly bound compound from four different directions, meeting in the center, the electrons in the hub element would be thrown off their rhythm much like the wiper blades in the aforementioned analogy. Four soliton waves converging on a single point would, in all likelihood, entirely dissolve any chemical bond.

Therefore, if a soliton emission system were constructed which randomly varied the point of convergence of the four (narrow) soliton waves, eventually, the entire volume of the vessel would be covered and its contents chemically unbound through catastrophic de-synchronization of the molecule's covalent electrons.

The number four is significant as an atom has four sides (from a two dimensional perspective) and because striking a compound with soliton energy from four directions simultaneously would cause electrons to undergo a 90-degree alteration in direction. This series of alterations, if timed properly, could be predicted to cause atoms that were strongly bound to strongly repel and for virtually any chemical compound bound on this basis to be dissolved.

Just as soliton waves can be used to "reset" the progression of electrons in atomic clock mechanisms in order to maliciously throw off their timing, it stands to reason that they therefore can throw off the timing that underpins covalent electron bonding; a phenomenon currently believed by the physics/chemistry community to be unrelated to timing.

## **Conclusion**

A physics-based method for dissolving chemical compounds such as this, if developed, would dramatically reduce the cost of obtaining valuable elements bound in compounds and would have incalculable economic impact.